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# Attachment Object Effects on Children's Anxiety During School-Related Transitions

By

Lauriann M. Jones

A thesis submitted to the Department of Psychology
in partial fulfillment of the requirements for the degree of

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Abstract

Because a child's first day of school can be anxiety provoking, familiar soothing inanimate objects, such as blankets, might help to minimize discomfort related to this novel situation. The current study examined the anxiety level of twenty-six one- to four-year-old children and their mothers at three times 1) before the first day of school, 2) during separation from their mother on the first day of school, and 3) after home from their first day of school. Maternal report was used to assess child and mother anxiety levels (Likert scale 0 – 10) and child level of attachment to a familiar inanimate object. No differences in anxiety levels were found among attached children who brought their attachment object with them on their first day of school, attached children without their objects, and unattached children with or without a familiar object. Children's anxiety did differ among the assessment times, verifying that separation from their mothers on first day of school is a low arousal situation. Mother's anxiety was not positively related to children's anxiety. Future studies might further explore an observed trend of children attached to inanimate objects displaying less anxiety than their unattached counterparts across school-related transitions.

Attachment Object Effects on Children's Anxiety During School-Related Transitions

Parents usually attempt to protect their children from discomfort. Unfortunately, discomfort cannot be avoided in everyday life. In psychology, many theories have been devised to address how humans cope with discomfort or anxiety, how it can be avoided, and what steps or stages of development may be involved. "Anxiety" is defined as "most generally, a vague, unpleasant emotional state with qualities of apprehension, dread, distress and uneasiness" (Reber, 1995). The grand theories (e.g., cognitive theory, learning theory, sociocultural theory, and psychoanalytic theory) and the minitheories (e.g., attachment theory, exchange theory, activity theory, and ethological theory) have been devised in an attempt to identify and define ways to avoid anxiety throughout the lifespan (Berger, 1998).

*Attachment & Attachment Theory*

Minitheories such as the Attachment Theory may be examined in order to identify and define ways to avoid anxiety. Such theories provide a closer look at minute details that may be lost in a grand theory. Attachment Theory is used to examine the relationship between a child and parent or caregiver, usually measuring behavior (e.g., anxiety) during first separations, novel situations, or strange situations considered low to moderately stressful (Ainsworth, 1985; Berger, 1958; Buckley, 1986). The term "attachment theory" is attributed to John Bowlby who in the 1950s attempted to described the development of a child's attachment to his mother more adequately than had been proposed prior, by combining and elaborating on views that he favored (Bowlby, 1958).

Mary Ainsworth (1985), once a member of Bowlby's research team, went on to become one of the architects of the study of attachment theory. She describes

"attachment" as an affectionate bond between people or animals that endures over space and time (Ainsworth, 1969). Most attachment research emphasizes the relationship between mother and child, defining varying degrees of attachment such as, secure, anxious, ambivalent, or avoidant (Ainsworth, 1969, 1985). It is thought that this affectionate bond can be transferred to an object as well, often referred to as an "attachment object", "transitional object", "pet object", or "first not-me possession" (Ainsworth, 1985; Mahalski, 1983; Winnicott, 1953). The terms will be used interchangeably in the research reviewed in the current manuscript, reflecting the terminology used within each discussed investigation. Mahalski (1983) and Winnicott (1953) note the distinction between "transitional phenomena" and "transitional object". Transitional phenomena are described as, babbling, repetitive sounds, sucking, rubbing, or pulling on objects that are not part of the infant's body while preparing for sleep. In comparison, a transitional object is described as, a blanket, bottle, pacifier, etc. used in transition to sleep. Present day, "attachment" is defined as "a binding affection" or "an emotional tie" that is "infused with dependency" and is usually referring to a relationship between people (Reber, 1995). "Attachment object" or "transitional object" refer to a relationship between a person, usually a child, and an object such as a blanket, that the child uses as a source of comfort and toward which the child shows signs of attachment (Reber, 1995).

*Methods of Measurement*

Maternal ratings and direct observational measures are methods for accurately measuring frequency of use and attachments to objects. Passman and Halonen (1979) attempted to establish the validity of maternal ratings of children's attachments to objects

and norms for attachments to objects. The validity of maternal ratings was established by comparing them to the observed behavior of the children. The two measurements were highly correlated ($r = .88$). Furthermore, *norms* (e.g., the prevalence rates for attachments to pacifiers, blankets, and hard objects) for children's attachments were recorded (see *Attachment Object Norms* section for more details).

Steier and Lehman (2000a) examined the maternal ratings and direct observational measures from 50 mother-toddler (15-31 months of age) dyads. Attachments to objects such as blankets and soft toys were measured by varying the arousal level (see *Arousal Situations* section for more detail) and various inanimate sources of comfort and familiarity while providing access to the mother and/or the attachment object, if the child had one. The validity of the maternal ratings of the children's attachments were supported by observational measures of the children's preference for the provided objects or people and the children's ability to distinguish between their attachment objects and other objects.

*Attachment Object Norms*

Children's attachment objects commonly include pacifiers, hard objects (e.g. toy trucks, books), and blankets, depending on the child's age (Passman & Halonen, 1979). A comparison of maternal ratings of children's attachments to three common attachment objects (e.g., pacifiers, blankets, and hard objects) was conducted. Six hundred and ninety mother-child dyads, with children's ages ranging from1.5 to 63 months, revealed that attachments to pacifiers tended to decrease from 3 – 24 months of age and attachments to blankets became very strong at 18 months of age. Attachments to hard objects were less common and changed little in prevalence or strength across ages.

Mahalski, Silva, and Spears (1983) conducted a longitudinal study in New Zealand comparing two groups of mother-child dyads with children between the ages of approximately 1-5 years old. The first group of children's mothers ($n$ = 158) were interviewed at home concerning the family, socioeconomic level, the child's development, and child rearing practices when their children were approximately 1 year old and again when they were 2 years old. The second group of children's mothers ($n$ = 1,037) were given questionnaires ($n$ = 1,026 replied) concerning their children's behavior and attachment to objects when their children were 3 years old and again when they were 5 years old. A relationship was found between sucking habits (e.g., thumbs, empty or full bottles, pacifiers) and the use of attachment objects. Attached children were more likely to have sucking habits than unattached children, across all ages. Younger children, from 1-2 years of age, of higher socioeconomic status (SES) were more likely to have sucking habits than were their counterparts from lower SES households. However, separate measures of the parent's individual income and educational level were not predictive of attachment habits. Further, the children's sex, age when walking began, toilet training, feeding habits, birth order, bed-time, sleeping place, parental separations, parental discipline, parental responses to crying, parental carrying of child, parental placement of soft object in child's bed, maternal caressing of child, and paternal involvement were not associated with development of attachments to inanimate objects. The central findings suggested that the variety of attachment objects (e.g., toy animals, dolls, blankets, hemmed fabric, cuddly rugs, gauze squares, napkins, handkerchiefs, sheets, pillowcases, clothing, jackets, vests, infant sleeping bags, sheepskin, pillows for child or doll, pet dogs or cats, toy vehicles, books) and behaviors (e.g., clinging, sucking, picking fluff from

objects and rubbing it on their face) served a common function of easing the children's transition into sleep.

In conclusion, Mahalski et al.'s (1983) findings indicated that the primary function for the use of attachment objects and oral habits were for easing the transition from wake to sleep. The use of attachment objects and oral habits decreased with age, and were most prevalent around two years of age. Soft toys were the most commonly used attachment objects across all ages. However, blanket attachments peaked at 2.5 years of age and received significantly stronger attachment ratings than all other objects. Additionally, approximately 36% of the younger children between 1.5 – 3.5 years sucked their thumb, finger(s) or other part of their hand while falling to sleep, while 50% of 5-year-old blanket users sucked their thumb or finger(s) while falling asleep. Another 13.1% of 1.5 year olds and 7.4% of 2.5 year olds sucked their bed linen, clothing, a doll, or a bottle while falling asleep. This sucking behavior was positively related to strength of attachment to the objects being sucked or snuggled. The authors also noted that children might have developed an attachment to a blanket because it was reported to be in the hand that was being sucked, possibly creating an association between thumb sucking and blanket hugging. One behavior develops into another, much as sucking on the breast often transitions into sucking on a bottle or a pacifier.

A longitudinal study of 33 children (19 boys, 14 girls, 73% first born, 93.9% Caucasian middle to upper-middle socioeconomic status) indicated that children with soft object attachments were rated as more securely attached to their mothers than those with pacifier attachments (Lehman, Denham, Moser & Reeves, 1992). Twelve-month old children were observed using Ainsworth and Wittig's, (1969) "Strange Situation Test",

which measures children's attachments to their mother (e.g., secure, anxious/avoidant, anxious/resistant) by exposing them to varying levels of social stress. When the children were between 16 and 20 months of age the mothers answered, through the mail, the "Object Attachment Questionnaire" to determine the children's attachment history to objects (e.g., soft objects, pacifiers). At approximately 24 months of age, a follow-up phone call was conducted to inquire about any changes in the children's attachments. At approximately 30 months of age, mothers completed Waters and Deane's (1985) "Attachment Q-Sort" in which they sorted 90 statements, from most characteristic to least characteristic of their child's behavior in hypothetical situations with their mother (i.e., child's attachment to their mother).

Lehman et al.'s (1992) findings revealed that more than 90% of the soft object attached children who had been rated as securely attached at 12 months of age were still rated as securely attached at approximately 19 months of age and 80% at approximately 30 months of age. Only 40 % of the children who were attached to pacifiers at approximately 19 and 30 months of age had been rated as securely attached at 12 months of age. These findings suggest that attachments to pacifiers at a later age may indicate less securely attached children because the transitional nature of attachment object types (e.g., from pacifiers to soft objects) may signify a necessary growth process seen in more securely attached children.

Ellen Gay (1996) examined the conditions that are involved in children's development and use of attachment objects. Her original study consisted of eight children (4 boys, 4 girls; two 2-2 ½ year olds and two 4-4 ½ year olds in each) observed in their homes. Later, her study was expanded to include 40 parents of children (14 girls, 26

boys, 2-11 years old) who answered a semi-structured questionnaire by phone or in person. The children's attachments were reported to have differed by age, from thumb sucking prior to 6 months, followed by pacifiers and bottles to blankets and soft objects. Blankets were the most popular "treasured object", and were most intense from 19 months to 2 ½ years. The blankets were commonly used when tired, preparing for sleep, quietly sitting and watching television, when upset, and during fantasy/pretend play. Findings indicated that the children's contact with their treasured object was closely correlated to times of increased stress, the appearance of regression type behavior, and times of fantasy play. Gay suggested that parents consider the child's age and developmental stage when encouraging and/or supporting the development and use of an attachment object.

Of course, the strongest and most consistent attachment appears to be to one's mother. This finding has frequently been demonstrated when young children in a novel or strange situation have exhibited "non-distressful adaptive behaviors" in the presence of their mothers (Passman & Adams, 1982). When attached (9 boys, 9 girls) and nonattached (9 boys, 9 girls) children, between the ages of 20 and 40 months old, were presented with either their mother, their attachment object (blanket), or an empty chair; the mother was consistently chosen over the attachment object or chair. The attached children also chose their blanket over the empty chair most often. In contrast, the nonattached children chose the empty chair over a familiar blanket from home, even though both had candy placed on them.

One study indicated that the mere presentation of a mother's voice, televised image, or photograph was an effective reinforcer for young children (Adams & Passman,

1979; Passman & Adams, 1982; Passman & Longeway, 1982). Sixty-seven preschool children (35 girls, 32 boys, 32 –48 months of age) were brought into an unfamiliar room that had a television on a shelf behind a chair (Adams & Passman, 1979). Children were randomly assigned to be exposed to their mother or a female stranger. The child's mother or the stranger would either sit in the chair, be viewed on a video played on the television, or have her voice projected into the room. Results indicated that the children played more with the toys and entered and spent more time in the play area of the room (rather than in a corner or up against a wall) when their mother was physically present, visually by video, or audibly present than any of the stranger conditions. The findings support previous research that mothers facilitate play and exploration behaviors in their children. They also show that the children became less dependent on physical contact with their mother by 3 years of age and were able to maintain the benefits of their mother's presence through more indirect means (e.g., audiotape, videotape).

In a closer look at the visual aspects of the mother on a child's behavior, 48 children (20 – 30 months old) were placed in an unfamiliar room with a photograph of their mother taken uniformly by the researchers (Passman & Longeway, 1982). The photograph either was blurred or clear and the children were told it was a picture of their mother, a stranger, or nothing about the photograph. Results indicated that the children with the clear pictures explored, played, and stayed in the room longer, held the picture more, looked at it more, and even named it "mommy" more often than the children with a blurred picture. This was true regardless of whom they were told the picture was of. These findings show the strength of a mother's image on her child's positive behavior in a novel situation.

Another study examined the effects of the mother's image in promoting a child's adaptive behavior in a novel situation with 40 mother-child dyads (20 girls, 20 boys, 36 – 54 months old) comparing the actual presence of the mother, a life-size video-taped presentation of the mother, life-size video-taped presentation of a stranger, or a gray light (Passman & Erck, 1978). Children with their mother or a video of their mother played and explored longer than children with a video of a stranger or a gray light. Later interviews with the children also revealed that 40% of the children who were presented with the video of a stranger mistook it to be their mother and explored and played longer than those who thought it to be a stranger. Thus, even the mere image, perceived as being the mother, was enough to promote adaptive behavior to a novel situation.

Passman and Lautmann (1982) found that a father's presence also might be beneficial. Two groups of girls ($n = 64$, 33–35 months or 41-45 months old), were placed in an unfamiliar testing situation and given "The Children's Apperception Test" with either their father, mother, or "security blanket" (i.e., the blanket a child is attached to). The presence of either the mother or father, during an introductory interaction, increased the child's interaction and performance (e.g., responding, talking) when the parents were not present during subsequent interactions. However, the presence or absence of the child's security blanket did not affect the child's performance, indicating some limits to blankets' influence.

In contrast, a behavioral comparison of children ($n = 64$, White, 24 - 39 months of age) attached to a blanket ($n = 32$, 16 boys, 16 girls) and not attached to a blanket ($n = 32$, 17 boys, 15 girls) when exposed to a new play setting with either their blanket, mother, hard toy, or nothing; indicated that the blanket attached children played and explored,

without distress, when in the presence of their mother *or* blanket (Passman & Weisberg, 1975). Additionally the blanket-attached children displayed less distress than did blanket unattached children or all the children with either a favorite toy or no object. The level of distress induced from the type of arousal situation (e.g., play vs. testing) may be related to the preferred type of attachment object necessary to cope (see "Arousal Situations" for further details).

*Arousal Situations*

Each situation (e.g., separation from parents, novel play setting, educational scenarios) creates its own level of distress that is individually interpreted by young children as low to highly arousing. Jonsson, Elwin, and Weingarten (1988) conducted an observational study in Sweden of children's (15 boys, 14 girls, 1.2 – 3.7 years old, middle class) use of attachment objects during two low arousal (mild to moderately stressful) situations in four day- nurseries. The first situation was when the parent or guardian left the child in the morning and the second situation was during the child's mid-day nap. Two-thirds of the children were reported by parents to have one to three attachment objects (e.g., soft toys, dolls, bedclothes, pacifiers) at home and sucking on pacifiers, thumb sucking, and twisting a lock of hair were noted of all the children at bedtime.

The children were accompanied by their parents when they arrived at the day care, 1 in 10 wrapped in a comforter (a thick blanket). One-third brought attachment objects from home, which along with the comforters, were placed in the children's lockers. Increased sucking on the attachment object was noted during the moments before its removal from the child. During the separation from the parents, six children borrowed an object from the room (e.g., toys, dolls, books, or a piece of clothing). Both attached

and unattached children adjusted to the morning separation similarly.

At naptime, more than half of the children used an attachment object from home or borrowed an object from the day care (e.g., soft toys, bed clothes, comforter, books) to help them to fall asleep. The stroking, fingering, or sucking on body parts (e.g., toes) or objects was seen in all the children while trying to fall asleep.

Passman (1977) found better performance and less anxiety during low arousal *new learning situations* (i.e., when a cue was given the child could press a button for candy) when preschoolers used attachment objects. Maternal ratings were used to measure the preschool children's attachment to a blanket. Observational measures were used to measure whether attached children placed in a new learning situation, with their blanket or their mother present, exhibited less anxiety and performed better on a new learning task than attached children without their blanket or their mother present, or unattached children with a blanket. The presence of their blanket or mother had equivalent results for the blanket-attached children but only the presence of the mother benefited the children who were not attached to a blanket. In other words, the presence of a blanket is only beneficial to children who are attached to them. A familiar blanket from home does not benefit the performance or lower the anxiety level of a child who is not attached to it. In summary, findings suggest that the presence of an attachment object in a new learning situation (i.e., a low to moderate arousal situation) can help reduce a child's anxiety and maintain performance on learning tasks as much as the presence of their mother.

Jalongo (1987) investigated whether blankets belong in an educational setting (i.e., a low to moderately stressful situation), specifically preschool. The review of

research on the use of attachment objects in a preschool setting indicated that they were beneficial in calming a child during various daily separations or transitions. Additionally, the reaction to the loss or removal of an attachment object may be extremely intense and increase alternative coping habits, such as thumb sucking. Parents and teachers were advised to be accepting of attachment objects and be assured children will rid themselves of their attachment objects in due time. The removal of an attachment object may increase insecurity and anxiety, whereas the reduced reliance of an attachment object comes naturally with the child's increased confidence and competence. Furthermore, an attachment object in a preschool setting may trigger friendships and play due to similar attachment objects between peers. As friendships develop and grow many children grow out of the need for their attachment object during social situations. Moreover, children should not be forced to share their attachment object and should be assured that their attachment object is safe from being removed by another. When young children are developing emotionally, they need sensitivity, acceptance, and assurance to develop emotionally appropriate behaviors.

A comparison between blanket attached and unattached children (23 girls, 25 boys, 21-40 months old) in the presence of attachment objects or their mothers in a *high arousal situation,* involving clicking noises and lowering of lights, indicated that only the presence of the mother benefited the child's behavior (Passman, 1976). Whereas, a study of the behavior 105 children (1 ½ - 3 years old) during a *low arousal situation* (their daily separation from parents or guardians in a childcare) benefited from the presence of their attachment object (Triebenbacher & Tegano, 1993). Children comforted themselves by rubbing and playing with their attachment object ritualistically. Attachment objects were

beneficial when used by children to reduce anxiety during low arousal/mildly stressful situations.

Ybarra, Passman and Eisenberg (2000) found that in certain arousal situations such as, routine medical examinations that involve inoculations, an anxious mother's presence might be more of an emotional hindrance than a comfort to a child. In these special situations, the presence of an attachment object was found to be a useful and preferable alternative to the mother's presence.

*Origins of Attachment Objects*

The origins of attachment objects have been examined by a variety of theorists such as learning theorists, and psychoanalytical theorists. Learning theorists believe that attachment to an object may occur when a child has repeated exposure to an object that has been paired with an attachment figure. For example, a child may become attached to a blanket when it is continuously paired with the child's mother, who may coddle the child with the blanket. Others feel it is the inherently warm comforting nature of the blanket itself that the child, through repeated exposures, grows to enjoy and want (i.e., develops an "affectionate bond" or "attachment"). Psychoanalytic theorists have referred to attachment objects as "transitional objects" or "transitional phenomena" and have historically taken a contradictory view of an attachment object as a pathological fetish that is, objects usually belonging to the opposite sex that satisfy sexual arousal (Reber, 1995; Winnicott, 1953, 1969).

A case study of a hospitalized 3-year-old boy with moderate cognitive delays illustrated the transitional development of attachments to objects (Friman, 2000). Taught by the nursing staff to suck on a pacifier with honey on it, the boy became attached to the

pacifier (eventually without honey) and would have tantrums when he would loose it in his bedding. The nursing staff tied a piece of cloth to it and he would rub his face with the cloth while he sucked on the pacifier. When the boy reached approximately 2 years of age, he transitioned from the pacifier to his thumb, but only when he held a piece of cloth.

Steier and Lehman (2000b) investigated 50 mother-child dyads (26 girls, 24 boys, 15-31 months old, white, middle to upper class) and found that the origin of a child's attachment to an object (i.e., soft objects) is related to and predictable by the mother's personality and interaction with child. Three questionnaires measuring object attachment, maternal personality, and child temperament were mailed to and completed by the mothers of toddlers (15-31 months old). Additionally, laboratory observations of the toddlers were conducted over 20 minutes of free play with their mother and during the introduction of a mobile clown to induce fear. Maternal positive affect and constraint were predictive of the levels of the toddler's attachment to soft-objects. Mothers who reported themselves as extroverted, with a strong sense of well-being, highly social, and accomplished displayed higher positive affect and rated their children as having stronger attachments to soft objects than did more moderate mothers. Additionally, mothers who reported themselves as having higher constraint (e.g., traditional values, rigidity, and reluctance to take risks) also rated their children as having stronger attachments to soft objects. Perhaps, children of more controlling mothers develop stronger attachments to objects in order to deal with higher levels of stress from their controlling parent. Whereas the children of the more sociable mothers may develop stronger attachments to objects in order to create a sense of control over an object to meet their comforting needs.

Wolf and Lozoff (1989) studied 150 American children ($M = 21.7$ months old, $SD = 11.8$ months) and found that the presence of an adult while a child fell asleep was the main determinant of whether a child developed and used an attachment object. Child rearing practices such as breast-feeding, location of child's sleeping place, and whether the child slept with the parent/s at night were not as important an influence on the development of attachment object use. These findings were congruent with cross-cultural findings (see the "Cultural & Socioeconomic Influence" section for further details) that suggest children who sleep in the same room as their parents are less likely to develop attachments to objects.

*Animal Studies*

Animal studies were conducted to see if an attachment to an inanimate object could be developed in guinea pigs but results were inconclusive (Janzen, Timmermans, Kruijt & Vossen, 1999). The guinea pigs were more interested in novel objects than the one they were reared with. Harlow and Harlow's (1962) classic study of a monkey reared with two surrogate mother objects, one a wire mesh monkey model with a bottle of milk and the other a terry cloth covered monkey model without any food, found that the young monkey spent the most time with the soft terry cloth monkey and only went to the wire mesh monkey model for food. It is possible that children's use of attachment objects represent an innate inclination toward persons or objects that provide soft comforting warmth.

*Cultural & Socioeconomic Influence*

Hong and Townes (1976) conducted a cross-cultural comparison of conditions under which attachment object use develops in 292 children born and raised in the United

States (i.e., US group), Korea (i.e., K group), and born in Korea but raised in the United States (i.e., USK group). Mothers of children (7 months - 8 years old) answered a 44-item questionnaire about sleeping arrangements, feeding, and childrearing practices. Multiple-child families were included in the analyses (e.g., 169 children from 106 families in the US group, 60 children from 40 families in the K group, 50 children from 30 families in USK group). Findings revealed the highest attachments to blankets and pacifiers were found in the American group, then Koreans raised in America, and lowest in Koreans raised in Korea. This may be related to the fact that more Korean children slept in the same room with their mothers, engaged in more physical contact with their mothers (especially at bedtime), and were breastfed longer than the US or USK groups. The cultural differences in child-rearing practices, especially more child-parent physical contact, maternal availability, and longer breastfeeding were related to less attachment object use.

Litt (1981) found that cultural and socioeconomic differences influenced attachment object development and use when she compared Black lower to lower-middle income ($n$ = 166, 78 boys, 88 girls, $M$ = 3.5 years $SD$ = .9 years) and White middle to middle-upper income participants ($n$ = 119, 50 boys, 69 girls, $M$ = 3.5 years $SD$ = .9 years). Results indicated that the White higher socioeconomic group developed attachments to objects 1.5 times more often than did the Black lower socioeconomic group. Furthermore, children who had their own rooms and slept alone from infancy were more likely to develop an attachment to an object then children who share a room or bed with another. Sleeping arrangements may have been influenced by socioeconomic status rather than by culture in the two groups. Additionally, the higher socioeconomic group

formed attachments to objects around 12 months of age (e.g., blankets), whereas the lower-socioeconomic group formed attachments around 15 – 16 months of age (e.g., stuffed toys, dolls). Possibly the lower socioeconomic group may not have needed an attachment object to deal with separations from the mother as often as the higher socioeconomic group because of smaller living quarters, shared rooms and beds, and the use of extended families rather than hired caregivers.

Yet an English study of 702 mother-child dyads found no significant relationships between the use of attachment objects and social class, gender, or sleeping arrangements. Instead, the investigation found the use of attachment objects to be positively related to a child's increased independence, sucking behavior (e.g., fingers and other objects), and ease of going to sleep and staying asleep (Boniface & Graham, 1979). In contrast to American prevalence rates, 573 (82%) of the children were identified as never having had an attachment to an object, 14 (2%) had an attachment object but no longer used it, 17 (2%) occasionally used an attachment object, while a mere 98 (14%) frequently use an attachment object.

*Pathological Consequences*

Passman (1987) investigated concerns about any pathological consequences due to the use of attachment objects on 108 (20-41 month old) children and did not find any strong relationships between attachment object use and insecurity. Children with attachments to objects were neither more secure nor less secure than children without attachments to objects. Maladjustment and psychopathology appear to be independent of whether or not the child has an attachment to an object.

A New Zealand study found that two samples of children with attachment objects

matured and adjusted just as did children without attachment objects (Mahalski, Silva & Spears, 1985). The first sample consisted of 158 mothers of 160 children, approximately 18 months of age. The second sample consisted of 1661 children on their 3rd and again on their 5th birthdays. Children with attachments to objects from both samples and across ages were significantly more likely to display increased sucking habits. Additionally, children with higher socio-economic status from the younger, 18 months old sample were more likely to have an attachment to an object than children with lower-socio-economic status or older children. Mothers of children with attachments to objects did not differ intellectually, in personality (e.g., scores for extroversion and neuroticism), or in childrearing practices (e.g., discipline, feeding, breast-feeding time, sleeping time and place, parental action to crying, amount of time carried by the parents, whether a soft toy was regularly placed in the child's bed, or separations from parents) from mothers of children without attachments to objects. Moreover, there were no significant relationships between the development of an attachment to an object and the child's sex, birth order, age when the child first started walking, toilet competence, vocabulary, nail biting, bullying of other children, paternal care, parent's education, marital status, play, reactions to strangers, independence, or whether the child was caressed during the interview. Worrying was found to be more common among 5-year-old attached children than unattached children, but childhood problems did not differ. In conclusion, the findings revealed very few differences between attached and unattached children.

A study of 54 developmentally disordered patients (21 mentally retarded and 33 pervasively developmentally disordered) indicated a dramatically reduced use of "treasured objects" (Sherman & Hertzig, 1983). Mothers of the patients were interviewed

through a semistructured telephone interview and history of patient's use of treasured objects and attachment to other objects were recorded. The participants' cognitive levels were assessed through the Gesell Developmental Schedules, Merrill-Palmer Scale of Mental Tests, WISC, and the Stanford-Binet Intelligence Scale. The participants' ages ranged from 2-32 years old and only 5 out of 54 (9%) subjects developed an attachment to an object within the first 2 years of life. Children with IQs above 70 were significantly more likely to develop an attachment to an object within the first 2 years of life than children with IQs below 70. Children with Intelligence Quotients (IQ) below 70 were unlikely to *ever* form attachments to objects. Additionally, the later developed attachment objects tended to be aberrant hard objects (e.g., matchbox car, green triangle, rubber fire engine, nail, screw) rather than the traditional items (e.g., blanket, toy, book, etc). The authors concluded that it is unlikely to find significant developmental delays in over 90% of children who develop an attachment to an object during their first 2 years of life.

Mack and Viederman (2000) also found that attachments to objects later in life were associated with mental disturbances. Adults with attachment objects (e.g., as stuffed animals) have been found to be associated with borderline personality disorder. Even asthma patients who had the "positive teddy bear sign" (a stuffed animal at their bedside) were found to be more likely than control subjects (i.e., without a stuffed animal) to meet Axis II diagnoses - Personality Disorders and Mental Retardation (Morrison, 1995). It should be noted that the presence of a stuffed animal does not necessarily indicate a mental disorder, but may be reflective of established behavioral patterns in the adult.

*Perception of Attachment Objects*

Lehman, Arnold, Reeves, and Steier (1996) delved into maternal perception of

children's attachments to objects. They examined 82 mothers of attached ($n = 58$) and unattached ($n = 24$) children (4-8 years old). Overall, the mothers were not anxious about their children's attachments and would not reduce their contact with an attachment object, even if they believed an attachment signified a deficiency in their own relationship with the child. The majority of the attached children's mothers maintained a positive and accurate view of children with attachment objects (61% pleased, 49% amused, 21% proud, 12% concerned, 9% annoyed, 2% embarrassed, and 0% sad). Mothers of children who had never developed an attachment to an object also maintained a positive view of their child's lack of attachment to an object (70% pleased, 44% proud). All of the mothers believed that attachments to objects start early in the first through third years of age, generally peak around two years of age, and may continue until preschool, elementary school, adolescence, or indefinitely.

Interestingly, prevalence rates were biased by whether their child had an attachment to an object or not. Mothers with attached children estimated prevalence rates for developing attachments to objects higher than mothers with unattached children, who estimated the prevalence rates were higher for not developing an attachment to an object (Lehman et al., 1996).

The mothers shared common beliefs about attachment objects and were very supportive of their child's choice of using an attachment object or not. Mothers of attached children washed the object, placed it where the child liked to keep it, made it available for the child across situations, played with it with the child, and mended it if needed (Lehman et al., 1996).

Then again, parents have been found to be reluctant to admitting to hiding,

throwing away, or expressing negative feelings toward their child's attachments to objects (Mahalski, 1983). One hundred and fifty-eight mothers of 160 children were quoted as saying that they were trying to break the child of it (the attachment to an object), that the object seemed unnecessary, it did not look good, the mothers themselves were going to "lose" the object soon, that a sibling lost their object and got over it after a few rough nights, and that they "didn't discourage" the child; rather they "just teased" the child about the object.

Lehman, Arnold, and Reeves (1995) interviewed 81 children (45 currently attached to a soft-object, 9 previously attached, 24 never attached, 3 no recollection of attachment, 4-8 years old, Caucasian, middle-class) as to their perception of attachment objects' history and function, adult's reactions, appropriate use, characteristics, and purpose of attachment objects. The children's response to, "what makes the object special" was overwhelmingly "texture" (i.e., softness, fuzziness, smoothness, cuddliness, warmth, and coolness), while only 17% said that it reminded them of mom or dad. Most children felt they had always had their object, it would always be special although they would probably grow out of it, wanted it at bedtime, naptime, and when they were sad and named it. Children also relayed events in which their object was useful (e.g., to hide from monsters, to keep away bad dreams, to feel like someone is with you, to talk to when you have a bad day, to confide in it things you can't say to others, and to do what it's told). Most children (89%) said their parents had rules about the use of the object (e.g., when and where it's appropriate, no sucking your thumb while holding it), helped take care of the object (e.g., washing, mending), and provided the object when needed.

Almost half the children noted that their parents had tried to take the object away,

hidden their object, thrown their object out, or threaten to throw it out when they are mad at the child. More than three-quarters of the attached children thought there should be limits on their object's use because they may get lost, dirty, wet, or "people might think you are a baby" but also believed there should be fewer restrictions on the younger children because "people will understand" (Lehman et al., 1995).

*Importance of Attachment Objects*

The importance of attachment objects has been illustrated repeatedly throughout each of the previous sections. An attachment object's ability to comfort a child has been found during a variety of low-moderate arousal situations (e.g., going to sleep at night alone, novel situations, educational situations, medical examinations.) when a parent's comfort is not available. Although some parents and institutions may discourage children from having an attachment to an object and may even attempt to break the attachment, children often benefit from an attachment object, especially in low arousal (mild to moderately stressful situations) such as the first day of school/first separation from their parents (Triebenbacher & Tegano, 1993).

The first day of school is a low to moderate arousal situation, in which children often first experience separation from their mother, father, family member, or close friend, resulting in a day filled with anxiety for both the children and the parents. Many children's first separation from their parents occur when the children are as young as a few months old and are placed in day-care or other form of childcare, when the parents go to work. For other children, the first separation occurs when they enter school (approximately 4-6 years old).

*Hypothesis*

First, it was hypothesized that object attached children with their attachment object present would show lower levels of anxiety than object attached children whose attachment object was absent or object unattached children, during separation from their mother on their first day of school. Second, it was hypothesized that object attached and object unattached children would show greater anxiety during separation from their mothers on the first day of school compared to their level of anxiety before or after this initial school experience. Third, it was hypothesized that mother's anxiety level would be predictive of their children's anxiety level during separation from their mothers on the first day of school. The study was intended to illustrate the benefits of an attachment object for comforting children experiencing anxiety related to their first day of school.

## Method

*Participants*

Participants were comprised of 26 middle-class biological mother-child dyads that volunteered participation. The participant's ethnic representation was 92% White and .08% other. The children's gender distribution was 50% male and 50% female. The children were divided into two age groups, 1-2 year old infants (54%) and 3 – 4 years old toddlers (42%). The mother's ages ranged from 25 – 42 years. The children were identified as either object attached (54%) or unattached (46%) by their mothers (See Table 1 on page 24).

Table 1

*Demographics of Participants*

| | Mothers ($n = 26$) | Children ($n = 26$) |
|---|---|---|
| Race | | |
| White | 24 (92.3%) | 24 (92.3%) |
| Black | 1 (3.8%) | |
| Cuban[a] | 1 (3.8%) | |
| Asian | | 1 (3.8%) |
| Bi-racial[b] | | 1 (3.8%) |
| Gender | | |
| Male | | 13 (50%) |
| Female | 26 (100%) | 13 (50%) |
| Age (Yrs) | 25 – 42 | 1 – 4.5 |
| M | 34.21 | 2.46 |
| SD | 3.74 | .82 |

| | | Attachment | |
|---|---|---|---|
| | | Attached | Unattached |
| Infant[c] | 14 | 9 | 5 |
| Male | 7 | 4 | 3 |
| Female | 7 | 5 | 2 |
| Toddler[d] | 12 | 5 | 7 |
| Male | 6 | 2 | 4 |
| Female | 6 | 3 | 3 |

[a] Cuban was a participant defined classification.
[b] Bi-racial was a participant defined classification.
[c] Infant group was 1 to 2 year olds.
[d] Toddler group was 3 to 4 year olds.

*Materials and Procedure*

One hundred and sixty questionnaire packets were distributed to six preschools within northeastern Florida (see Appendix). The questionnaires were completed by the children's mothers (maternally rated) and included questions about themselves as well as their children. The questionnaires included yes/no items, fill in the blank items, circle your choice items, and Likert scale items (0 – 10 point scale). The preschools distributed the questionnaire packets to all new students' parents, either by hand or by including the packets in their new student mailings. The schools were instructed (verbally and in writing) to distribute the questionnaires to parent of children who had never experienced a preschool or a day-care separation from their parents before, so-called "first timers". The questionnaire packets included a letter to the parent or guardian inviting their participation and briefly explaining the experiment, a consent form to be signed by the participating parent or guardian, three sealed questionnaires, a debriefing form, and a postage-paid and addressed envelope to return the questionnaires and consent form. Each sealed questionnaire had instructions for when to open it, printed on the outside: "Questionnaire 1: Please do not open and complete until the day before the first day of school.", "Questionnaire 2: Please do not open and complete until after dropping child off on the first day of school.", "Questionnaire 3: Please do not open and complete until after the child comes home from their first day of school." The debriefing form seal stated, "Debriefing Form: Please do not open and read until after the completion of all three questionnaires."

*Reliability and Validity.* Maternal ratings of their children's level of attachment and anxiety have proven valid and reliable throughout several studies (Passman &

Halonen, 1979; Passman & Weisberg, 1975; Steier & Lehman, 2000a). Passman and Halonen (1979) found the validity of maternal ratings of their children's attachments to objects to be highly correlated to the children's observed behavior, $r = .88$ (see "Methods of Measurement" for more details).

*Design*

The design included a 3 *Presence* (*Present*, *Absent*, or *Unattached*) x 1 *Transition* (*During* separation from their mother on the first day of school) factorial design and a 2 *Attachment* (object *Attached* or object *Unattached*) x 3 *Transitions* (*Before* the first day of school, *During* separation from their mother on the first day of school, or *After* school) mixed factorial design with *Transitions* as the within variable, *Attachment* as the between variable, and *Children's Anxiety* level as the dependent variable. Additionally, a paired comparison between *Mother's Anxiety* level and *Children's Anxiety* level was conducted. The study was quasi-experimental because the groups were "ex post facto" (i.e., formed of already existing characteristics).

## Results

There were no significant differences in anxiety between *Attached* children whose attachment object was *Present* ($n = 8$), *Attached* children whose attachment object was *Absent* ($n = 6$), and *Unattached* ($n = 12$) children during separation from their mother on the first day of school, $F(2, 23) = .63$, $p. = .54$ (see Figure 1 on page 27).

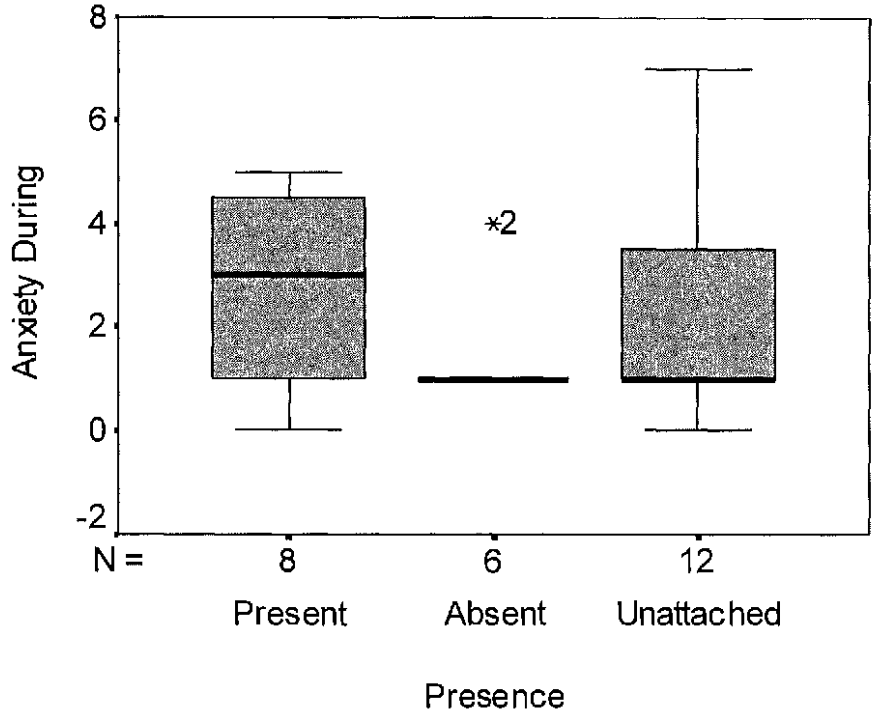


*Figure 1.* *Anxiety* level of *Attached* children whose attachment object was *Present*, *Attached* children whose attachment object was *Absent*, and *Unattached* children *During* separation from their mother on their first day of school (i.e., Hypothesis 1).

However, *Attached* and *Unattached* children's *Anxiety* differed significantly from each other during school related *Transitions* (*Before* the first day of school, *During* separation from their mother on the first day of school, and *After* school), $F(2, 48) = 3.10$, $p. = .05$. Further examination revealed the differences lie only *Before* the first day of school, $F(1, 24) = 5.53$, $p. < .03$ (see Figure 2 on page 28).

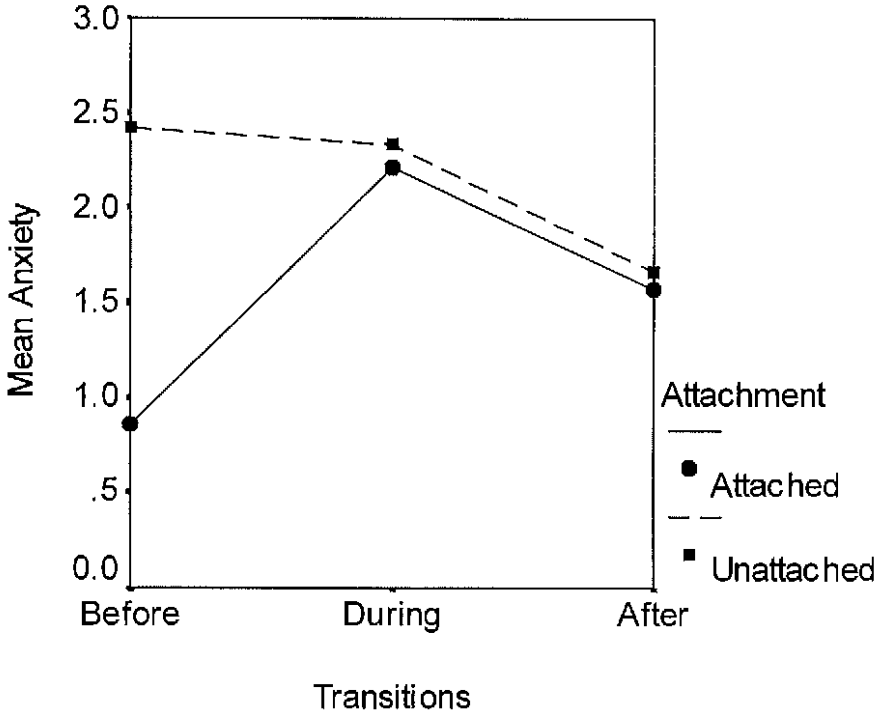


*Figure 2.* Mean *Anxiety* of *Attachment - Attached* or *Unattached* children across *Transitions - Before* the first day of school, *During* separation from their mothers on the first day of school, and *After* school on their first day (i.e., Hypothesis 2).

*Attached* and *Unattached* children's *Anxiety* did not differ significantly *During* separation from their mother on the first day of school or *After* their first day of school, $F(1, 24) = .00$, $p. > .10$ (see Table 2 on page 29). Mauchley's test of sphericity was not significant, $p. = .35$, so tests of within subject effects sphericity assumed was used.

Table 2

*Statistics for Hypotheses and other Analyses*

| H | Variables | *n* | Anxiety *M* | *SD* | Results |
|---|---|---|---|---|---|
| 1 | | | | | $F(2,23) = .63, p. = .54$ |
| | Present | 8 | 2.75 | 1.91 | |
| | Absent | 6 | 1.50 | 1.22 | |
| | Unattached | 12 | 2.33 | 2.46 | |
| 2 | | | | | *Overall* - $F(2, 48) = 3.10, p. = .05$* |
| | Attached | 14 | | | |
| | Before | | .86 | 1.17 | *Before vs. During* - $F(1,24) = 5.54, p. = .03$* |
| | During | | 2.21 | 1.72 | *During vs. After* - $F(1,24) = .00, p. = .97$ |
| | After | | 4.71 | 2.84 | |
| | Unattached | 12 | | | |
| | Before | | 2.42 | 3.09 | |
| | During | | 2.33 | 2.46 | |
| | After | | 3.75 | 3.31 | |
| 3 | | | | | $r = .33, p. = .099$<br>$t(25) = -6.60, p. .000$ |
| | Mother's Anxiety | 26 | 2.27 | 2.05 | |
| | Child's Anxiety | 26 | 6.35 | 3.16 | |
| Gender | | | | | $t(24) = .28, p. = .78$ |
| | Male | 13 | 2.38 | 2.22 | |
| | Female | 13 | 2.15 | 1.95 | |
| Age | | | | | $t(24) = -.33, p. = .74$ |
| | Infant | 14 | 2.14 | 1.66 | |
| | Toddler | 12 | 2.42 | 2.50 | |
| Transitions | | | | | *Overall* - $F(2, 50) = 2.48, p. = .09$ |
| | Before | 26 | 1.58 | 2.35 | *Before vs. During* -$F(1, 25) = 4.36, p. = .05$* |
| | During | 26 | 2.27 | 2.05 | *During vs. After* - $F(1, 25) = 4.49, p. = .04$* |
| | After | 26 | 1.62 | 1.94 | |

* $p < .05$, **$p < .01$, two-tailed.

Mother's *Anxiety* levels were not positively correlated with their children's *Anxiety* levels, $r = .33, p. = <.10$ (see Figure 3). Furthermore, *Mother's Anxiety* levels differed significantly from their children's *Anxiety* levels, $t\ (25) = -6.60, p. < .01$. All t-tests were two-tailed comparisons conducted at the .05 significance level.

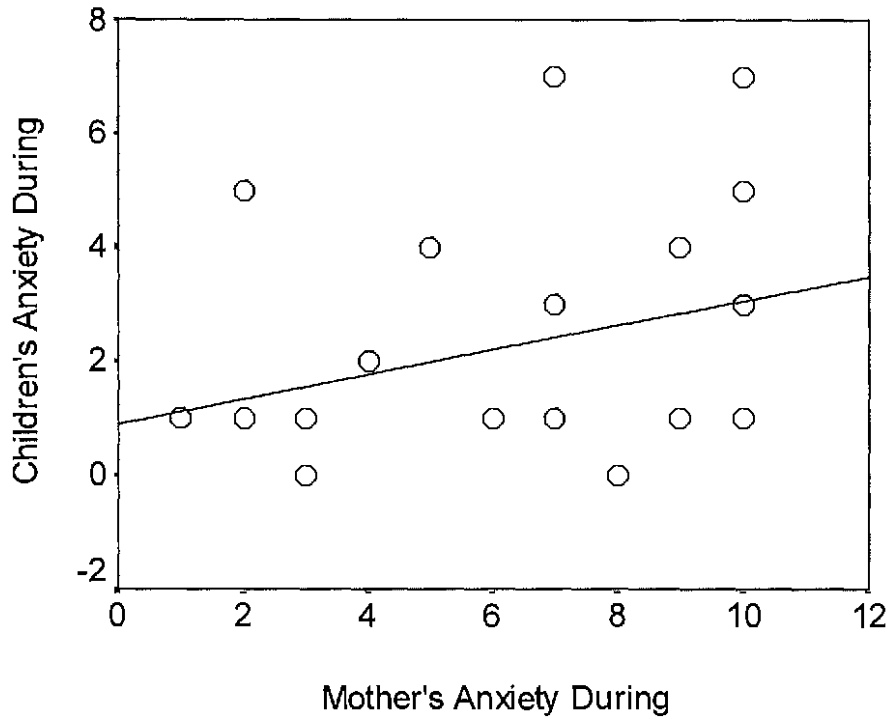


*Figure 3. Mother's* and their *Children's Anxiety During* separation from each other on the first day of school (Hypothesis 3).

Demographic information such as attachment object *Type* (blanket, pacifier, or soft toy), child's *Level* of attachment to their object, *Gender* (*Male* or *Female*), and *Age* (1 – 2 year old *Infants* or 3 – 4 year old *Toddlers*) were collected. Due to inadequate cell sizes, the influence of attachment object *Type* (blanket, pacifier, or soft toy) or differences among the objects could not be analyzed. *Level* of attachment was used to

verify *Attachment* (*Attached, Unattached*). *Attached* children's level of attachment ranged from 4-10 ($M = 7.57$, $SD = 1.83$) on a Likert scale of 0-10. *Males* and *Females* did not differ significantly in their *Anxiety During* separation from their mothers on the first day of school, $t$ (24) = .28, $p.$ = .78 (see Figure 4).

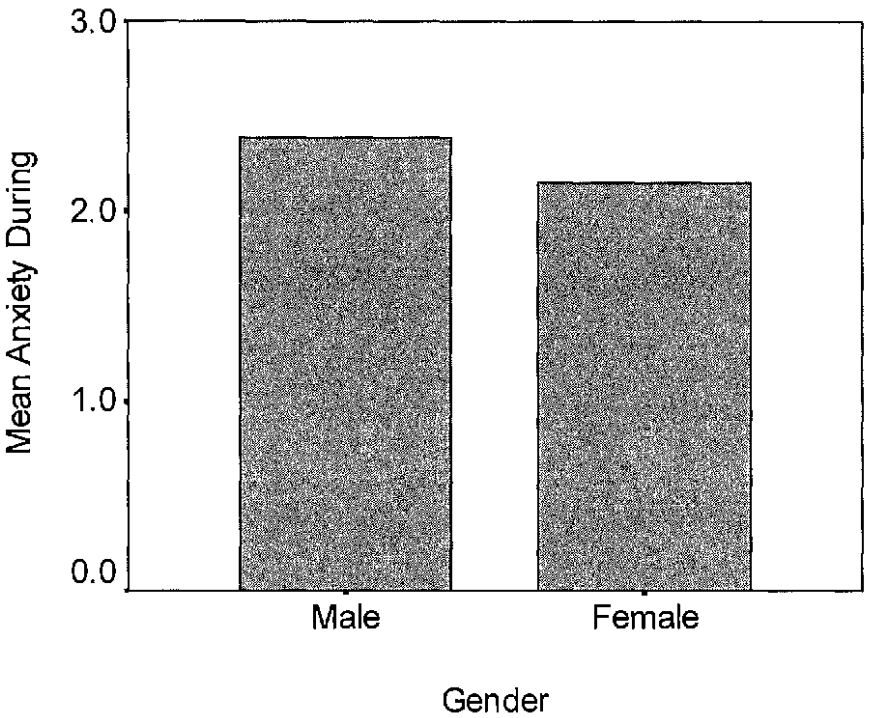


*Figure 4. Children's* mean *Anxiety* by *Gender* (Male and Female) *During* separation from their mothers on their first day of school.

Additionally, *Infants'* (1 – 2 year olds) and *Toddlers'* (3 – 4 year olds) *Anxiety* levels did not differ significantly *During* separation from their mothers on the first day of school, $t$ (24) = -.33, $p.$ = .74 (see Figure 5 on page 32). Levene's tests were not significant for all applicable analyses and equal variances were assumed.

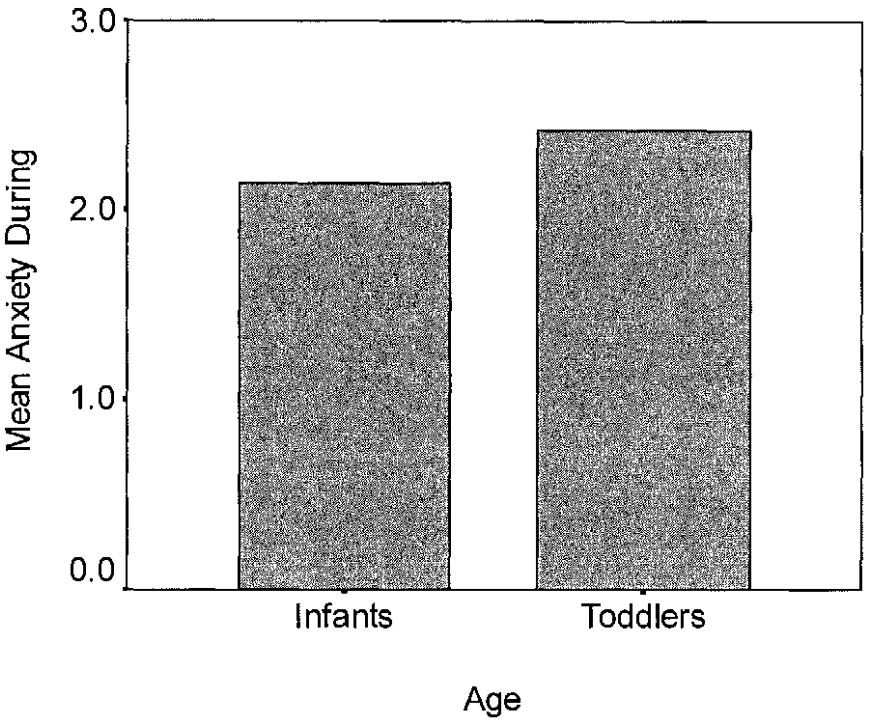


*Figure 5.* Children's mean *Anxiety* by *Age* (Infants and Toddlers) *During* separation from their mothers on their first day of school.

## Discussion

Findings did not support the first hypothesis that object *Attached* children who have their attachment object *Present During* separation from their mothers on the first day of school would show lower levels of *Anxiety* than object *Attached* children whose attachment object was *Absent* and object *Unattached* children who don't have an attachment object at all (see Figure 1 on page 27). These findings contrast with those of several documented studies in which children have been found to use their attachment object to comfort and sooth themselves by ritualistically rubbing and playing with it in low to moderately arousing situations, similar to the situation examined in this study (Triebenbacher & Tegano, 1993).

On the other hand, these findings may be illustrative of literature which has found

that reduced reliance on attachment objects comes with increase confidence and competence (Jalongo, 1987). Therefore, the object attached children who brought (Present) and did not bring (Absent) their attachment objects would not differ significantly from each other due to their increased confidence acquired from the current or past use of attachment objects. In other words, the object attached children who did not bring their attachment object (Absent) with them on the first day of school may have chosen not to bring it because they had developed an increased sense of confidence and competence through attachment object use in their past.

The second hypothesis that object *Attached* and *Unattached* children would show increased *Anxiety During* separation from their mothers on the first day of school as compared to *Before* or *After* school was not supported by this study (see Figure 2 on page 28). Although, *Attached* and *Unattached* children's *Anxiety* differed significantly from each other during school related *Transitions* (i.e., *Before* the first day of school, *During* separation from their mothers on the first day of school, and *After* their first day of school), only *Attached* children showed an increase in *Anxiety* from *Before* the first day of school. The *Unattached* children showed a very slight decline in *Anxiety* from *Before* the first day of school to *During* separation from their mothers on the first day of school. Although there was not a significant difference in *Anxiety* levels for the children *During* separation from their mothers on the first day of school and *After* their first day of school; Figure 2 (on page 28) illustrates a trend for increased *Anxiety During* separation from their mothers on the first day of school. If *Attached* and *Unattached* children were combined, their mean *Anxiety Before* the first day of school would fall below their *Anxiety* level *During* separation from their mothers on the first day of school. The

resulting graph would show a trend for children's *Anxiety* to peak *During* separation from their mothers on the first day of school as compared to *Before* and *After* school (see Figure 6).

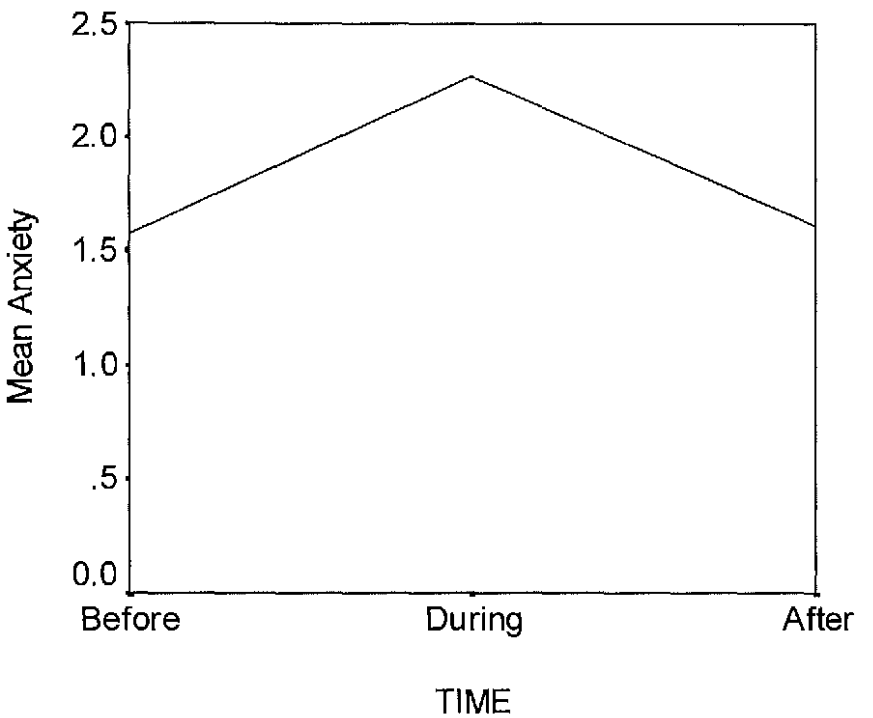


*Figure 6.* Mean Anxiety across Transitions (Before, During, and After the first day of school).

The plausible conclusion that separation from parents on the first day of school is experienced as a low to moderately arousing situation has support from similar studies (Jalongo, 1987; Passman, 1977; Triebenbacher & Tegano, 1993). Daily separations from parents in childcare have been found to be a low arousal situation in which children benefited as much from the presence of their attachment object as from the presence of their mother (Passman, 1977; Triebenbacher & Tegano, 1993). Furthermore, attachment objects in a preschool setting have been found to be beneficial in calming or soothing a

child during various daily transitions and removal of the attachment object during these situations have resulted in increased alternative coping habits, such as thumb-sucking (Jalongo, 1987).

A fortuitous finding from the analysis of the second hypothesis was the trend of the *Attached* children to maintain lower levels of *Anxiety* than the *Unattached* children across school-related *Transitions* (see Figure 2 on page 28). A finding that *Attached* children are less anxious than *Unattached* children across situations may find support in the literature. It has been found that attachment objects give children an alternative source of comfort, to their parents (Triebenbacher & Tegano, 1993; Ybarra, Passman & Eisenberg, 2000). This comfort source may be available to the children when they wish and allow them the confidence to travel farther from their home base (i.e., mother) than children without an attachment object resulting in a newfound sense of confidence and competence (Jalongo, 1987). Contradictory evidence may also be found in the literature. Maladjustment and psychopathology have been found to be independent of whether or not the child has an attachment to an object (Passman, 1987). There have been no strong relationships found between attachment object use and insecurity and attached children have been found to mature and adjust just as children without attachment objects (Mahalski, Silva & Spears, 1985; Passman, 1987).

Contrary to previous findings, maternal anxiety levels were not found to be predictive of their children's anxiety levels (see Figure 3 on page 30). Surprisingly, *Mother's Anxiety* levels were significantly different from their *Children's Anxiety* levels *During* separation from each other on the first day of school. While *Mother's Anxiety* range was from 0 – 10 on the Likert scale ($M = 5.0$, $SD = 2.05$), Children's Anxiety was

overwhelmingly low ($M$ = 1.0, SD = 3.16). Research on depressive mothers have found that a mothers' mood influences their children's personality development in a similar direction as their own maladaptive form (Bee & Boyd, 2002). Just as a depressed mother's mood and behavior influences their children's mood and behavior, similarly a mother's anxious mood and behavior is often believed to influence their children's anxiety level. Attachment objects have been studied to be used as a buffer from a mother's maladaptive reaction to a situation, which may be detrimental to a child's ability to develop appropriately adaptive behaviors (Ybarra, Passman, & Eisenberg, 2000).

Demographic information such as the child's *Gender* and *Age* were not found to be influential on children's Anxiety levels *During* separation from their mothers on the first day of school (see Figures 4 on and 5 on pages 31-32). Although, *Attached* and *Unattached Infants* and *Toddlers* have been found to differ from each other in the literature. The use of attachment objects and oral habits have been found to decrease with age and were most prevalent at approximately two years of age (Mahalski, Silva, and Spears, 1983). Furthermore, it has been suggested that parents consider the child's age and developmental stage when encouraging and/or supporting the development and use of an attachment object (Ellen Gay, 1996). Though male and female infants and toddlers *Anxiety* levels were similar *During* separation from their mothers on the first day of school, preliminary analyses of Attachment (Attached and Unattached), Gender (Male and Female) and Age groups (Infants and Toddlers) suggest differentiated patterns between Transitions (Before and After) their first day of school that could not be analyzed due to insufficient cell sizes (see Figures 7, 8 and 9 on pages 37-39).

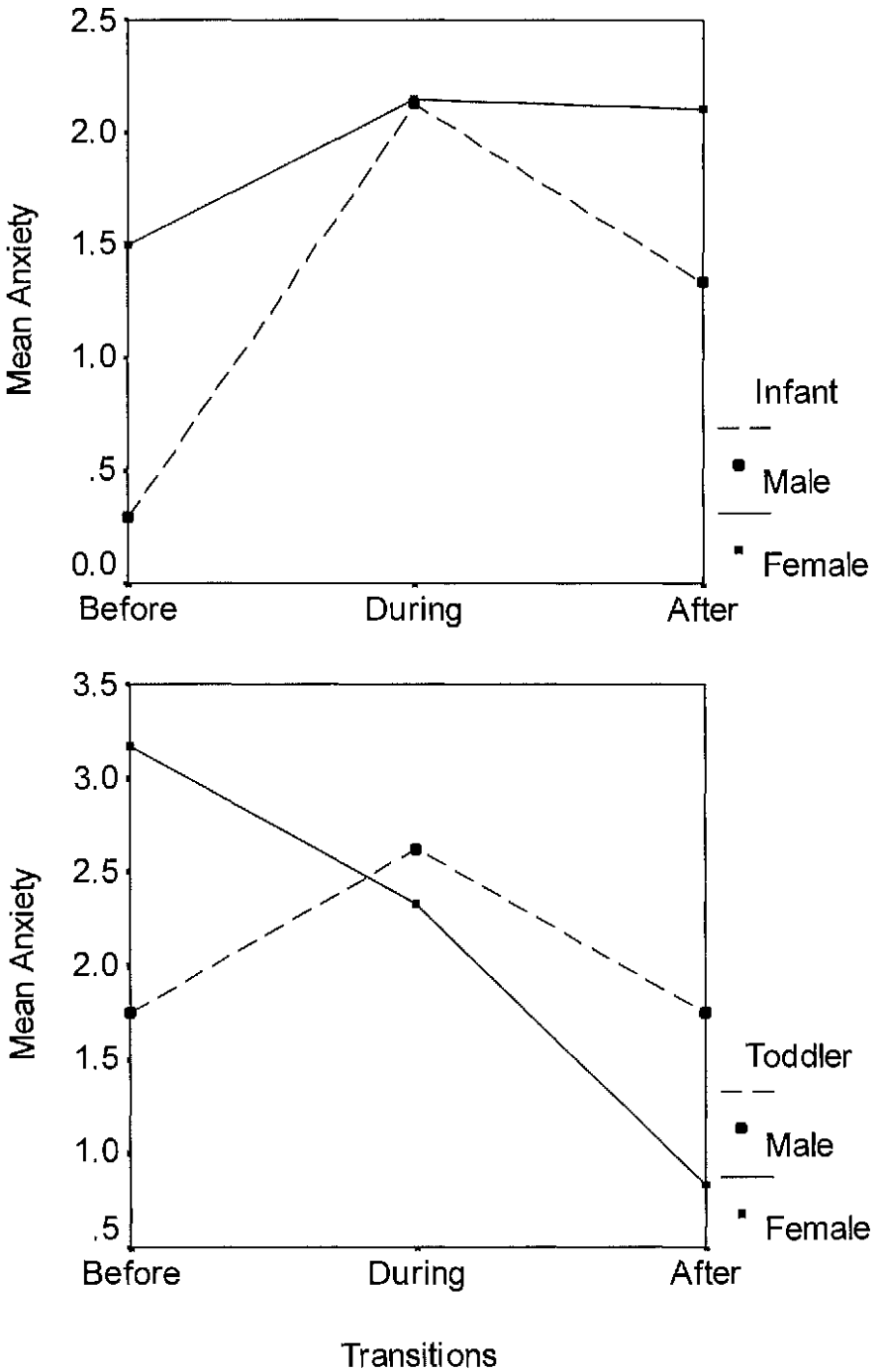


*Figure 7.* Gender (Male and Female) by Age (Infant and Toddler) across Transitions (Before, During , and After).

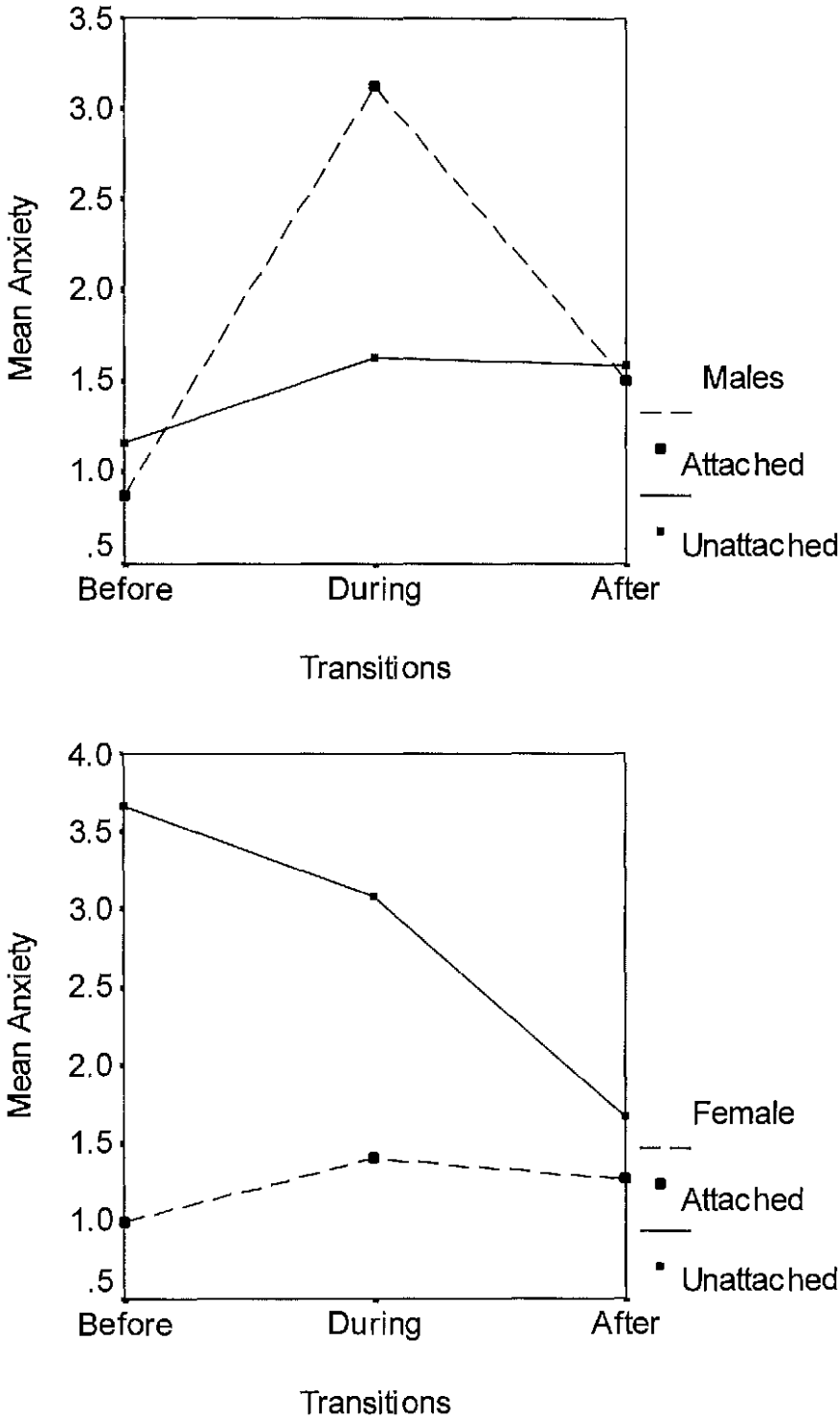


*Figure 8.* Attachment (Attached and Unattached) by Gender (Male and Female) across Transitions (Before, During, and After).

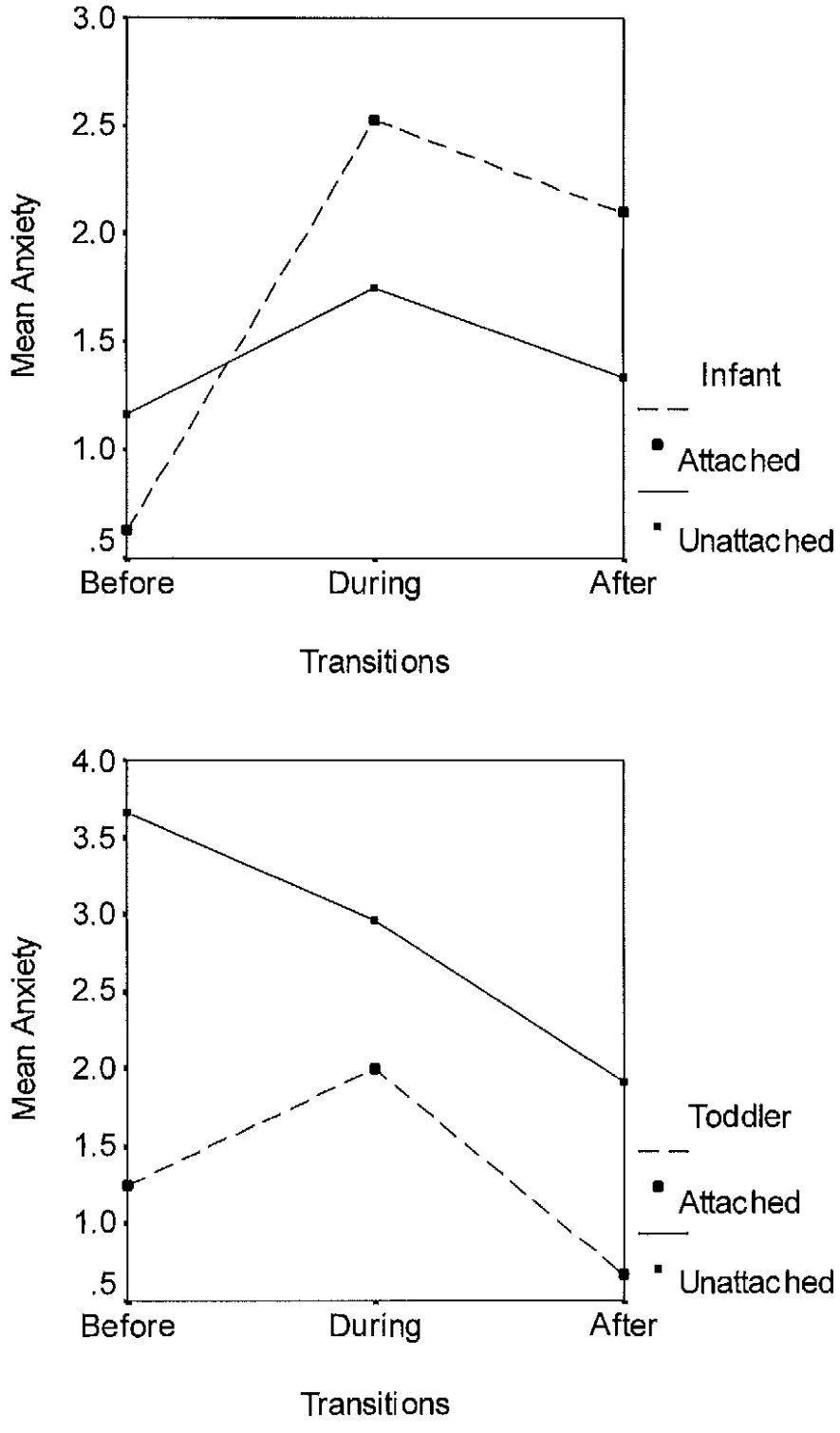


*Figure 9.* Attachment (Attached and Unattached) by Age (Infants and Toddlers) across Transitions (Before, During, and After).

Although, the *Type* of attachment object was not analyzed due to small cell sizes, it too may have been an influence a child's *Anxiety* level *During* separation from their mother on the first day of school. A child's age may be related to the Type of attachment object preferred by a child and the attachment objects themselves may have differing soothing capabilities (see Figure 10).

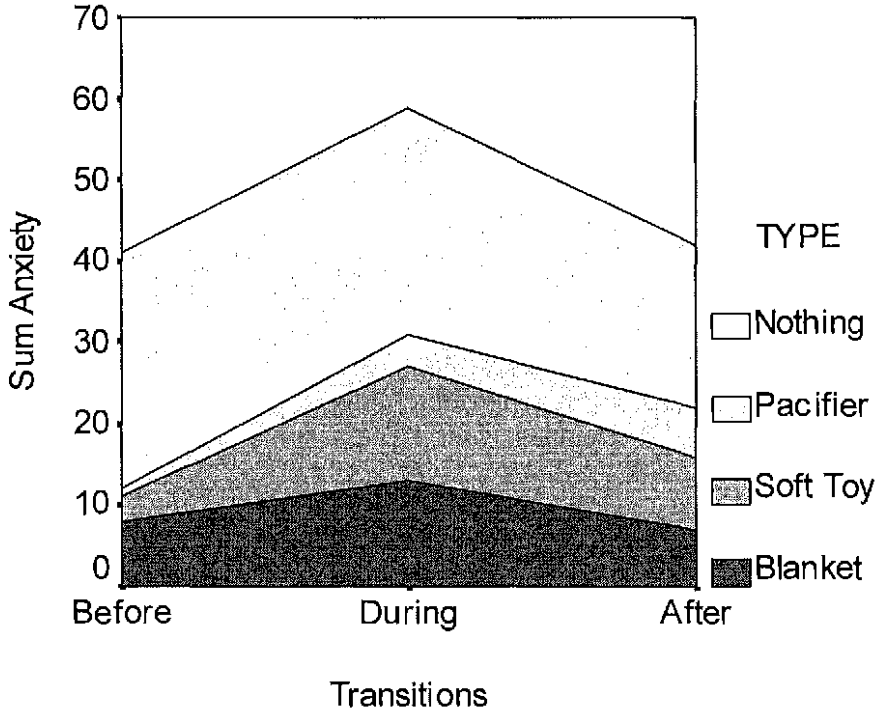


*Figure 10.* Children's sum *Anxiety* by *Type* of attachment object across school-related *Transitions* (Before, During, After).

The *Infant* group used and brought *Pacifiers* with them to school (*Present*) and exhibited the most *Anxiety During* separation from their mothers on the first day of school, which may be expected due to limited cognitive abilities or the limited soothing abilities of a pacifier. The *Toddler* group tended to be attached to *Blankets* or *Soft Toys* and did not exhibit as much *Anxiety During* separation from their mothers on the first day

of school, possibly related to increased soothing nature of a blanket. The *Toddler* group may even have chosen not to bring their attachment object with them due to their increased confidence gained from the use of their attachment object. Preliminary analysis revealed that children in the *Blanket* group maintained the lowest levels of anxiety across *Transitions*. Children in the *Soft Toy* and *Pacifier* groups had the next to lowest levels of *Anxiety* and those children with *Nothing* (i.e., *Unattached*) had the highest levels of anxiety across *Transitions*.

*Limitations*:

Return rate was the greatest limitation of this study, only 26 of 160 (16%) questionnaires were returned. Larger sample size would have increased power for data analyses, identifying possibly undetected differences and providing more surety about the robustness of the afore mentioned effects, such as those between *Attachment* (Attached and Unattached) and *Object Presence* (Present or Absent). Additionally, the analysis of *Object Type* (Blanket, Soft Toy, or Pacifier) and various interactions, including gender and age, may have been possible to evaluate given larger, more appropriate cell sizes.

Other limitations to the study were the racial, cultural, and socioeconomic homogeneity of the sample, volunteer participants, and lack of control due to indirect parent contact (via mail). Working through the mail enabled very little control over "when and where" the questionnaires were completed, perhaps influencing response bias or reporting behavior. The voluntary status of the participants may indicate a certain homogeneous educational level. Additionally, how the children behaved once their mothers had left them at school was unable to be measured in this study.

*Future Studies*

Future studies might incorporate more control into the design such as enrolling the help of a doctor's office or presenting the information at a school's orientation night. At orientation night the researchers could collect demographic information, informed consent forms, and even the first questionnaire concerning the child's anxiety about their upcoming first day of school. On the first day of school, when the parents or guardians (in this study they were all biological mothers) bring the children to school, the researchers could collect the second questionnaire. This process could allow for evaluation of inter-rater reliability and validity of the maternal ratings by having multiple researchers at each preschool to independently rate the children's behavior at separation from the mother and throughout their first day of school. The researchers could return the following morning to greet the mothers when they bring their children back to school and collect the final questionnaire at that time.

Other measures also could be taken if mothers were available in person, such as measures of personality (e.g., introverted vs. extroverted), or childrearing practices (e.g., breastfeeding, sleeping arrangements) to compare to previous research. A mother's personality and interaction with child have been found to be related to a child's development of an attachment object (Steier and Lehman, 2000b). Maternal positive affect and constraint were found to be predictive of the levels of the toddler's attachment to soft-objects. Extroverted Mothers with a strong sense of well-being, who were highly social, and accomplished displayed higher positive affect and rated their children as having stronger attachments to soft objects. Higher constraint mothers with traditional values, who were rigid and reluctant to take risks, rated their children as having stronger

attachments to soft objects. Additionally, the presence of an adult while a child fell asleep has been found to be the main determinant of whether a child develops and uses an attachment object (Wolf and Lozoff, 1989).

Even the addition of a measure to allow the children to circle a picture (e.g., a range of smiley faces to sad and angry faces) to describe how they feel at each of the three time periods could greatly contribute insight to the benefits of attachment objects. Future studies should probably omit the limitation of including only "first timers" (i.e., children who have never experienced a separation from their parent in a daycare or similar facility). The first day of school can be an anxious day for students of all ages and experience, even college students. Whether it was the child's first experience separating from their mother could be included and analyses separately, without omitting any willing participants from the study.

Theoretically, the fields of attachment objects and attachment theory generally maintain separation in the literature. One study found children with soft object attachments to be more securely attached to their mothers than those with pacifier attachments (Lehman, Denham, Moser & Reeves, 1992). Furthermore, attachments to pacifiers at a later age may indicate less securely attached children because the transitional nature of attachment object types (e.g., from pacifiers to soft objects) which appear to be part of a necessary growth process. This combination of Attachment Object Theory and Attachment Theory seems to be a logical one. Object attached and object unattached secure, anxious, ambivalent, or avoidant children's anxiety levels could be measured during separations, novel situations, or strange situations in the presence or absence or their attachment object. It would be interesting to see if the object *Attached*

*avoidant* children still show lower levels of anxiety than the object *Unattached secure* children. While it is difficult to measure attachment styles of children at older ages, some researchers (e.g., Mary Main) are in the process of devising new methods to do so with promising success (Ainsworth, 1985).

*Contributions*

In conclusion, the current study's findings contribute to the research on attachment objects by illustrating the overall lower levels of anxiety presented by attached children in an applied setting. The comforting, anxiety reducing, security-inducing qualities of an attachment object seem to benefit children experiencing school-related transitions. These findings should be reassuring to parents of children with object attachments and enlightening to parents of children who have not yet established an object attachment or parents who have discouraged such attachments.

Additionally, the results of the study could benefit preschools and daycares, since one of the preschools included in the study did not allow children to bring their attachment objects with them to school. The school presented this rule in writing to prospective parents. School officials did not allow parents to walk their children in, or stay with them on the first day of school (or any day, for that matter). This school, and assumedly others, may have misconceptions about attachment objects. Potentially this research may benefit the quality of knowledge about attachments to inanimate objects and the usefulness of accessing these special relationships for their soothing benefits among child-care facilities, educational establishments, and parents.

The need for occasional comforting is an important fact of human functioning. It appears that children may have an inherent ability to discover ways of soothing

themselves. It is important as parents and caregivers that we appreciate and protect this adaptive behavior.

References

Adams, R. E., & Passman, R. H. (1979). Effects of visual and auditory aspects of mothers and strangers on the play and exploration of children. *Developmental Psychology, 15,* 269-274.

Ainsworth, M. D. (1969). Object relations, dependency, and attachment: A theoretical review of the infant-mother relationship. *Child Development, 40,* 969-1025.

Ainswoth, M. D. (1985). Patterns of attachment. *Clinical Psychologist, 38,* 27-29.

Bee, H. & Boyd, D. (2002). *Lifespan development*. Boston, MA: Allyn & Bacon.

Berger, K. S. (1998). *The Developing Person Through the Life Span*. New York, NY: Worth.

Boniface, D. & Graham, P. (1979). The three-year-old and his attachment to a special soft object. *Journal of Child Psychology & Psychiatry & Allied Disciplines, 20,* 217-224.

Bowlby, J. (1958). The nature of the child's tie to his mother. *International Journal of Psycho-Analysis, 39,* 350-373.

Buckley, P. (1986). *Essential papers on object relations*. New York, NY: New York University Press.

Friman, P. C. (2000). "Transitional objects" as establishing operations for thumb sucking: A case study. *Journal of Applied Behavior Analysis, 33,* 507-509.

Gay, E. (1996). The context for children's touching of treasured objects: Bunnies, bears, and blankets. In L. Luborsky (Ed.), *The symptom-context method: Symptoms as opportunities in psychotherapy* (pp. 309-341). Washington, D.C.: American Psychological Association.

Harlow, H. F. & Harlow, M. K. (1962). Social deprivation in monkeys. *Scientific American, 207,* 136-144.

Hong, K. M. & Townes, B. D. (1976). Infant's attachments to inanimate objects: A cross-cultural study. *Journal of American academy of child Psychiatry, 15,* 49-61.

Jalongo, M. R. (1987). Do security blankets belong in preschool? *Young Children, 42,* 3-8.

Janzen, M. I. D., Timmermans, P. J. A., Kruijt, J. P. & Vossen, J. M. H. (1999). Do young guinea pigs (cavia porcellus) develop an attachment to inanimate objects? *Behavioural Processes, 47,* 45-52.

Jonsson, C., Elwin, I. & Weingarten, B. (1988). The use of attachment objects and transitional object equivalents in separation situations: Naturalistic observations in Swedish day nurseries. In P. C. Horton, G. Herbert, & K. J. Kreutter (Eds.), *The solace paradigm: An eclectic search for psychological immunity* (pp.229-250). Madison, CT: International Universities Press.

Lehman, E. B., Arnold, B. E., Reeves, S. L. (1995). Attachments to blankets, teddy bears, and other nonsocial objects: A child's perspective. *Journal of Genetic Psychology, 156,* 443-459.

Lehman, E. B., Arnold, B. E., Reeves, S. L., Steier, A. (1996). Maternal beliefs about children's attachments to soft objects. *American Journal of Orthopsychiatry, 66,* 427-436.

Lehman, E. B., Denham, S. A., Moser, M. H., & Reeves, S. L. (1992). Soft object and pacifier attachments in young children: The role of security of attachment to the mother. *Journal of Child Psychology & Psychiatry & Allied Disciplines, 33,*

1205-1215.

Litt, C. J. (1981). Children's attachment to transitional objects: A study of two pediatric populations. *American Journal of Orthopsychiatry, 51,* 131-139.

Mack, A. H. & Viederman, M. (2000). The use of transitional object in the context of mental illness. *Psychosomatics, 41*, 433-435.

Mahalski, P. A. (1983). The incidence of attachment objects and oral habits at bedtime in two longitudinal samples of children aged 1.5-7 years. *Journal of Child Psychology & Psychiatry & Allied Disciplines, 24,* 283-295.

Mahalski, P. A., Silva, P. A., Spears, G. F. (1985). Children's attachments to soft objects at bedtime, child rearing, and child development. *Journal of American Academy of Child Psychiatry, 24,* 442-446.

Morrison, J. (1995). *DSM-IV made easy: The clinician's guide to diagnosis*. New York, NY: Guilford Press.

Passman, R. H. (1976). Arousal reducing properties of attachment objects: Testing the functional limits of the security blanket relative to the mother. *Developmental Psychology, 12,* 468-469.

Passman, R. H. (1977). Providing attachment objects to facilitate learning and reduce distress: Effects of mothers and security blankets. *Developmental Psychology, 13,* 25-28.

Passman, R. H. (1987). Attachments to inanimate objects: Are children who have security blankets insecure? *Journal of Consulting & Clinical Psychology, 55,* 825-830.

Passman, R. H., & Adams, R. E. (1982). Preferences for mothers and security blankets and their effectiveness as reinforcers for young children's behaviors. *Journal of*

*Child Psychology & Psychiatry & Allied Disciplines, 23,* 223-236.

Passman, R. H. & Erck, T. W. (1978). Permitting maternal contact through vision alone: Films of mothers for promoting play and locomotion. *Developmental Psychology, 14,* 512- 516.

Passman, R. H., & Halonen, J. S. (1979). A developmental survey of young children's attachments to inanimate objects. *Journal of Genetic Psychology, 134,* 165-178.

Passman, R. H., & Lautmann, L. A. (1982). Fathers, mothers, and security blankets' effects on the responsiveness of young children during projective testing. *Journal of Consulting & Clinical Psychology, 50,* 310-312.

Passman, R. H. & Longeway, K. P. (1982). The role of vision in maternal attachment: Giving 2-year-olds a photograph of their mother during separation. *Developmental Psychology, 18,* 530-533.

Passman, R. H., & Weisberg, P. (1975). Mothers and blankets as agents for promoting play and exploration by young children in a novel environment: The effects of social and nonsocial attachment objects. *Developmental Psychology, 11,* 170-177.

Reber, A. S. (1995). The Penguin Dictionary of Psychology. London, England: Penguin.

Sherman, M. & Hertzig, M. E. (1983). Treasured object use- A cognitive and developmental marker. *Journal of the American Academy of Child Psychiatry, 22,* 541-544.

Steier, A. J. & Lehman, E. B. (2000a). An observational measure of children's attachments to soft objects. *Child Study Journal, 30,* 253-271.

Steier, A. J. & Lehman, E. B. (2000b). Attachment to transitional objects: Role of maternal personality and mother-toddler interaction. *American Journal of*

*Orthopsychiatry, 70,* 340-350.

Triebenbacher, S. L. & Tegano, D. W. (1993). Children's use of transitional objects during daily separations from significant caregivers. *Perceptual & Motor Skills, 76,* 89-90.

Winnicott, D. W. (1953). Transitional objects and transitional phenomena: A study of the first not-me possession. *International Journal of Psycho-Analysis, 34,* 89-97.

Winnicott, D. W. (1969). The use of an object. *International Journal of Psycho-Analysis, 50,* 711-716.

Wolf, A. W. & Lozoff, B. (1989). Object attachment, thumbsucking, and the passage to sleep. *Journal of the American academy of child & Adolescent Psychiatry, 28,* 287-292.

Ybarra, G. J., Passman, R. H., & Eisenberg, C. S. (2000). The Presence of Security Blankets or Mothers (or Both) Affects Distress During Pediatric Examinations. *Journal of Consulting and Clinical Psychology, 68*, 322-330.

Appendix

Dear Parent or Guardian:

I am a graduate psychology student of The University of North Florida, studying children on their first day of school. I would like to invite you to participate in research that examines children's behavior on their first day of school. This study will help develop procedures that promote a positive transition from home to school.

*It is very important that you do not discuss the research with your child until after all questionnaires have been completed and returned, as it may influence their behavior.*

Your child's school has seen and approved details of the study, as has the Institutional Review Board of the University of North Florida. You will need to complete three very brief questionnaires and return them to the principal investigator, in the enclosed postage-paid and addressed envelope. Each questionnaire is to be completed at different times, over two days, as directed on each questionnaire's cover. The questionnaires are anonymous and confidential. The whole process should take no more than a couple of minutes a day.

The parents or guardians who return all three completed questionnaires and the consent form will be included in the study. Results of the study can be obtained by contacting the principal investigator who was recently awarded the Southeastern Psychological Association (SEPA) and the Committee on Equality of Professional Opportunity (CEPO) Student Research Award at the 2001 SEPA Convention.

If you have any questions about participation or procedures, please feel free to contact the principal investigator by e-mail (xxx@unf.edu), or by phone (xxx) xxx-xxxx.

If you are willing to participate, please sign the attached form.

Sincerely,

Lauriann M. Jones
Principal Investigator

Informed Consent

Principal Investigator

Lauriann M. Jones
University of North Florida
(xxx) xxx – xxxx
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Faculty Advisor

Dr. Gabriel J. Ybarra, Ph.D.
University of North Florida
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Project Title

Children's First Day of School

Description of Study:

Participants are parents or guardians of children entering kindergarten or younger that are experiencing their first separation from home and parents (not including visiting family or friends). The parent or guardian is presented with three brief questionnaires. The first questionnaire is to be answered the day before the first day of school. The second questionnaire is to be answered following drop-off of the child on the first day of school. And the third questionnaire is to be answered after the child comes home from their first day of school. The three questionnaires are then mailed back to the researchers in the provided postage-paid and addressed enveloped.

The are no anticipated risks. All participation will be anonymous. Participants are free to withdraw consent and to discontinue participation in the project at any time without prejudice. There will be no monetary compensation for participation.

If you have any questions about participation or procedures, please feel free to contact the principal investigator by e-mail, or by phone (see above contact information).

I have read and I understand the procedures described above. I agree to participate in the study and I have received a copy of this description.

_____

Participant Date

_____

Principal Investigator Date

Questionnaire 1

Please circle the choice that most closely describes your answer.

1. Does your child have an attachment to an object, such as a security blanket, soft toy, hard toy, or other object?

   YES NO (if No, go to number 4)

2. Please circle the item that best describes your child's attachment object.

   a) SECURITY BLANKET
   b) SOFT TOY
   c) HARD TOY
   d) OTHER _____

3. Please rate your CHILD'S attachment to their favorite object.

No Attachment _____ Very Attached

0 1 2 3 4 5 6 7 8 9 10

4. Please rate your CHILD'S anxiety about the upcoming first day of school.

None _____ Very Nervous

0 1 2 3 4 5 6 7 8 9 10

5. Please rate YOUR anxiety about the upcoming first day of school.

None _____ Very Nervous

0 1 2 3 4 5 6 7 8 9 10

6. Please CIRCLE or WRITE-IN the demographics that best describes:

YOURSELF

RACE:
a) Black
b) White
c) Asian
d) Other _____

GENDER:
a) Male
b) Female

AGE: _____

YOUR CHILD

RACE:
e) Black
f) White
g) Asian
h) Other _____

GENDER:
c) Male
d) Female

AGE: _____

RELATIONSHIP TO CHILD:
a) Mother
b) Father
c) Step Mother
d) Step father
e) Other _____

Questionnaire 2

Please circle the choice that most closely describes your answer.

1. Did YOU drop-off your child, TODAY, the first day of school.

YES NO

2. Please rate your CHILD'S anxiety at drop-off TODAY, the first day of school.

None Very Nervous

0 1 2 3 4 5 6 7 8 9 10

3. Please rate YOUR anxiety at drop-off TODAY, the first day of school.

None Very Nervous

0 1 2 3 4 5 6 7 8 9 10

4. Did your child bring an attachment object with them to school today?

YES NO

5. If so, what kind of attachment object did your child bring?

a) SECURITY BLANKET
b) SOFT TOY
c) HARD TOY
d) OTHER _____

Questionnaire 3

Please circle the choice that most closely describes your answer.

1. Did YOU pick-up your child from school TODAY, the first day of school.

YES NO

2. After talking with your child, please rate your CHILD'S anxiety during school TODAY, the first day of school.

| None | | | | | | | | | | Very Nervous |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

3. Please rate YOUR anxiety about your child TODAY, the first day of school.

| None | | | | | | | | | | Very Nervous |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

*Thank you very much for your participation in the study.*
*Please feel free to write any further information or comments below.*

Debriefing Form

Project: Children's First Day of School

The study examined the beneficial effect the presence of an attachment object, such as a security blanket, may have on reducing children's anxiety on their first day of school. It was hypothesized that children who have an attachment to an object will benefit from its presence during the first day of school. These findings contribute empirical evidence to the field of psychology about influences that may aid in reducing children's anxiety during the first day of school (i.e., preschool). Use of these findings may be incorporated into preschool programs to ease children's entrance and transition into a new school environment from a familiar home environment.

If further information is desired, please feel free to contact the principal investigator, Lauriann Jones by e-mail (xxx@unf.edu) or by phone at (xxx) xxx - xxxx.

Thank you for your time and cooperation.

Vita

Lauriann Jones: Born , Dallas, Texas

Colleges and Universities:

2000 – 2002 M. A. General Psychology, University of North Florida

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1998 – 1998 Education (Master Program), Jacksonville University, Jacksonville, Florida

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